

Treatment of a 9 year old boy with severe disruptive behavior disorders with Atomoxetine after insufficient response to high dose methylphenidate: A case study

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Introduction:

- In 2002 the selective norepinephrine reuptake inhibitor atomoxetine was introduced as a non-stimulant alternative to methylphenidate (MPH) for the treatment of ADHD. We present a case study of a 9 year old boy whose medication was changed from high dose methylphenidate to atomoxetine.

Case Presentation

Chief complaint

- Peter is a 11-year-old boy and his mother describes him as disruptive since early childhood. He was admitted to day clinic treatment for an atomoxetine trial after insufficient effects from high-dose methylphenidate and low dose risperidone.

Psychiatric history:

- ADHD diagnosed with 4 years followed by outpatient treatment in various settings. First inpatient admission in Budapest/Hungary at age 7, followed by 2 admissions in German hospitals at age 9 and age 10.

Educational history:

- Intensive special educational services since second grade. Peter has been described as disruptive and provocative in school.

Social history:

- Peter lives together with his mother, his step-father and his 4 year-old sister. Sister is developmentally retarded, expressive language disorder. Mother is a nurse, stays with her children since Peter became difficult. Step-father works as paramedic. Peter suffers from having no friends. Likes playing with technical toys. Started attending martial arts course with positive feedback from trainer.

Family history:

- His mother's family emigrated from Hungary when she was a child. Mother describes her father as extremely impulsive. She retrospectively judges many male relatives including her brother and her nephew as being impulsive and suffering from ADHD. She never lived together with Peter's father, Peter never met his father.

Medical history:

- Tachycardia controlled by pediatrician since early childhood. 120 bpm under MPH.

Medication history:

- Peter was treated with methylphenidate since the age of 5;10. Because of his severe disruptive behavior and lack of concentration the dosage was augmented by a child psychiatrist in private practice to 80mg (23 kg, i.e. 3.5mg/kg) and desipramine was further added. A transient reduction to 40mg per day led to a significant exacerbation so that the mother increased methylphenidate up to 160mg per day (42.5kg, i.e. 3.75mg/kg). Temporarily haloperidol was added in low dosage. Despite this enormous amount of medication the treatment effect was still insufficient. Then the boy was transferred to our hospital.

Differential Diagnosis:

- Most likely diagnoses are ADHD hyperactive-impulsive type and oppositional defiant disorder. Bipolar disorder needs to be ruled out.

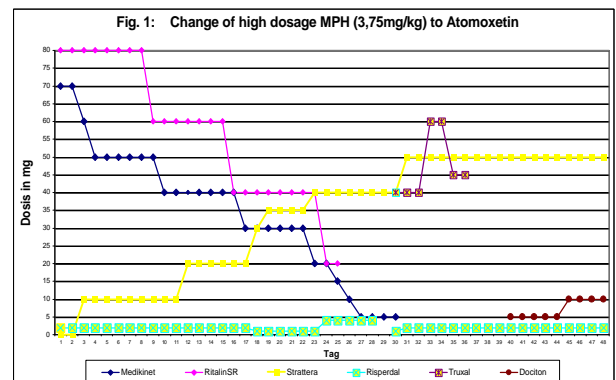
Day clinic admission

Mental status exam at admission to day clinic:

- Peter is alert and oriented. Memory intact. During exam affectionate and respectful. Mood is irritable with lability, looks depressed. No looseness of associations nor evidence of delusions or hallucinations. Thought content is centered on his wish to return home as soon as possible. No evidence of suicidal ideation. Judgement and insight is felt to be adequate, although he tends to externalize blame.

Psychopharmacological treatment:

- Medication at admission: MPH SR 40mg-20mg-0-0, MPH 10 mg – 5 mg – 5 mg – 20 mg; risperidone 1,5mg
- We completely changed the medication to a combination of atomoxetine 50mg/day (1.2mg/kg) and risperidone 2mg/day.
- Fig1 shows the treatment strategy we applied:



Results:

- In the first weeks after the change of medication the boy was still disruptive with a low level of frustration but on a higher level of psychosocial functioning. At the time of discharge from day-care treatment however school-functioning and mother-child interactions were still severely disturbed. Getting along with other children and adults was difficult.
- About 8 months later the situation both at school and at home had changed in a very positive way. According to his mother the mother-child interaction was not impaired for the first time in his life. He was able to attend school (4th grade) in a regular way without severe academic or behavioral problems.
- Medication was changed by his mother again to atomoxetine 28mg – 10mg – 10mg – 25mg and risperidone 1,5mg without consulting the hospital. Her rationale for switching from twice daily dosage to four doses per day was tachycardia (150 bpm) and hypertension.

Conclusions:

- In this case of a boy with severe ADHD and highly aggressive behavior the combination of atomoxetine and risperidone was the first medication that changed the behavioral and emotional problems in a substantial way. The long term course has to be followed up. The boys clinical course is complicated by the symptoms suggestive of bipolar disorder